REMARKS

The Office Action and the references cited therein have been carefully considered and amendments have been made to the independent claims to more accurately define the invention as claimed and to emphasize preexisting differences between the invention as claimed and the prior art of record.

The Examiner has rejected claims 1-4, 6, 8, 10-12 and 14-19 under 35 U.S.C. §102(b) as being anticipated by Moh et al. (hereinafter "Moh") and has rejected the remaining claims under 35 U.S.C. §103 as being unpatentable over Moh. As a result of the amendments that have been made to independent claims 1, 8, 14 and 17, it is believed that these claims are neither anticipated, taught or suggested by Moh applied singularly or in combination with any of the other art of record.

The Examiner attempts to read Moh on the independent claims, such as claim 1 and in so doing, distorts the teachings of this patent. Moh discloses a very complex system that is, in a sense, the antithesis of the method and system that is described in the present application. In the background of the invention, applicants describe that transactions between agents in a typical network or computer interconnect fabric are done using packets which generally comprise two or more flits or micro-packets which are usually rather small, e.g., 128 bits. This ensures a short transmission time and enables easily handling by VLSI chips along the path.

Applicants then describe prior art methods of ensuring reliability of packet transmissions and that they generally fall into two categories which are flit level error detection and correction and end-to-end transmission assurance. Cyclic redundancy checks or error correcting codes can check the contents of a flit for transmission errors and depending upon the nature of the error can make corrections. The other category of end-to-end transmission assurance involves an acknowledgement sequence between the ultimate recipient of the packet and the sending agent. In that method, the receiver of the packet immediately sends an acknowledgement packet to the sender when the complete packet is received. Applicants state that this approach works well in handling a large class of errors that can corrupt a packet during transmission. However, they also state that the cost of this system is high since the sending agent must store all packets that are in flight and must

use some sort of time-out mechanism to determine if the receiver has not gotten the packet at which time the sender resends the packet. Also, there is significant bandwidth overhead because of the use of acknowledgment packets.

Clearly, Moh teaches a very complex system that has mandatory acknowledgements. While the Examiner states that control messages have a size that is at most 64 bites, this is not the same as described in the present application. While the present system has data units that are in the range of about 64 to about 256 bits, these flits or data units have both the control portion and information portion contained in the 64-256 bits. As is clearly stated at column 5, line 50, the data messages in Moh have a size which is up to one Megabyte, which is characterized as being relatively large.

As is also shown in Fig. 3 of Moh, there is a control information flit for a control packet (610), a control information flit for a data packet (620) and an acknowledgement flit (630) which has a sequence error bit 637 as well as a packet sequence number of the data packet having errors that bits 27 and 28 identified as component 638.

The applicants' system is in stark contrast to that of Moh. Amended claim 1 is directed to a method for providing error detection and correction of transmission of data units between a sending and receiving agent as claimed with the method comprising the sending agent inserting a sequence identifier for each data unit, the receiving agent examining the sequence identifiers of the data units received and the receiving agent initiating a communication with the sending agent *only* if the receiving agent determines that a received data unit has an incorrect sequence identifier, in which event the receiving agent requests the sending agent to resend the data unit for which it is determined that the sequence identifier is incorrect. As is crystal clear from the last element of the claim, applicants' method does not use acknowledgment packets or any other type of communication if data is correctly received. Because the data units are relatively small, the system recognizes that the chances that a data unit will be corrupt is minimal if the sequence identifiers for successive data units are as they should be.

Not only is this a clean and simple method, it eliminates bandwidth requirements that would otherwise be utilized if acknowledgement packets are returned to the sending agent after every data unit is received. Moh simply fails to anticipate, teach or suggest the method of amended claim 1 and therefore should be allowed.

Similar language has been provided in amended claim 8, amended claim 14 and amended claim 17 and the arguments that have been made with regard to amended claim 1 also apply to these claims. The dependent claims necessarily include the features of the independent claims from which they depend, in addition to defining additional features and functionality. For this reason, the pending dependent claims are also believed to be allowable.

For the foregoing reasons, reconsideration and allowance of all pending claims is respectfully requested.

Respectfully submitted,

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